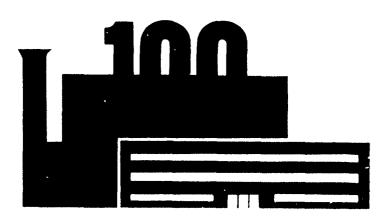
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100 COMPANIES

receiving the Largest Dollar volume of prime contract awards Fiscal Year 1983

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DIRECTORATE FOR INFORMATION OPERATIONS AND REPORTS (DIOR) THE PENTAGON, WASHINGTON, D.C.

Department of Defense

100 COMPANIES RECEIVING THE LARGEST DOLLAR VOLUME OF PRIME CONTRACT AWARDS

Fiscal Year 1983

Issued Annually by

Department of Defense
Washington Headquarters Services
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FOREWORD

This report is published annually by the Office of the Secretary of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports. It contains summary data on the 100 companies and their subsidiaries which were awarded the largest total dollar volume of Department of Defense prime contract awards during Fiscal Year 1983.

The report is approved for public release at cost; distribution unlimited. Requests for additional copies should be addressed to the Director for Information Operations and Reports, Washington Head-quarters Services, The Pentagon, Room 1C535, Washington, D.C. 20301. (When ordering, cite publication number P01.)

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INTRODUCTION

This report presents summary data on the 100 companies and their subsidiaries receiving the largest dollar volume of Department of Defense (DOD) prime contract awards during Fiscal Year (FY) 1983 Table 1 (page 7) lists the 100 companies in alphabetical order and gives their associated rank. Table 2 (page 9) identifies the parent companies in rank order, with their subsidiaries, and gives the total net value of awards for both the parent company and its subsidiaries. In many cases the parent company receives no awards itself but appears on the list because of its subsidiaries. Table 2 also shows what percent of the total awards each company's awards represent as well as the cumulative percent represented by all companies.

NOTES ON COVERAGE

Data in this report reflect the net value of both debit and credit procurement actions over \$25,000, e.g., the value of a terminated contract or other downward adjustment to a contract is deducted from a firm's total award amount, while modifications and other positive adjustments are treated as increases. Procurement actions include definitive contracts, the obligated portions of letter contracts, job orders, task orders, delivery orders, and any other orders against existing contracts. Research and development, services, construction, and supply and equipment contracts, worldwide, are included.

The report does not include those parts of indefinite quantity contracts that have not been translated into specific orders to business firms, or those contracts that have not yet become mutually binding agreements between the government and the company. The company totals do not include contracts made by other U.S. Government agencies and financed with Department of Defense funds or contracts awarded in foreign nations through their respective governments.

The assignment of subsidiaries to parent companies is based on stock ownership of 50 percent or more by the parent company, as indicated by data published in standard industrial reference sources. The company names and corporate structures are those in effect as of September 30, 1983. For the purposes of this report company names have been retained unless specific knowledge was available that a company has been merged into the parent or absorbed as a division with loss of company identity. Only those subsidiaries are shown for which procurement actions have been reported.

HIGHLIGHTS OF FY 1983 DATA

Department of Defense prime contract awards over \$25,000 totaled \$128.2 billion during FY 1983, \$11.5 billion more than in FY 1982. The 100 firms and their subsidiaries receiving the largest amount of DOD contracts in FY 1983 received \$89.6 billion or 69.9 percent of this amount, primarily for aircraft, missile/space systems, ships, and electronics/communications equipment. In FY 1982, the top 100 companies received \$76.8 billion or 65.9 percent of all awards.

Table A below shows that the first five companies received 20.6 percent of the total received by all companies in FY 1983, compared with 19.6 percent during FY 1982. The company ranked as number one during FY 1983, General Dynamics Corporation, also ranked as number one last year, with awards of \$6.8 billion during FY 1983 as compared to \$5.9 billion last year. The smallest total amount received by a company in the FY 1983 list was \$126 million, compared with \$136 million in FY 1982.

TABLE A

Company		Percent	of Total	
Position	FY 1980	FY 1981	FY 1982	FY 1983
1st	4.6%	4.5%	5.0%	5.3%
2nd	4.2	3.9	4.8	4.8
3rd	4.0	3.5	3.6	3.5
4th	3.1	3.0	3.2	3.5
5th	2.9	2.8	3.0	3.5
TOTAL 1-5	18.8	17.7	19.6	20.6
6-10	11.0	.4	11.5	13.7
11-25	15.4	15.6	14.8	16.3
TOTAL 1-25	45.2	43.8	45.9	50.6
26-50	11.6	12.4	10.8	10.7
51-75	5.8	6.4	5.7	5.3
76-100	3.3	3.8	3.5	3.3
TOTAL 1-100	65.9 %	66.4%	65.9%	69 .9%

Changes in the Top 100 Companies, FY 1982 to FY 1983

Sixteen contractors who did not appear on the list last year are among the top 100 companies this year. (See Table B, page 3.) Of these, one appears in position 28, one in position 49, and the balance between positions 58 and 100. The sixteen contractors who appeared on the FY 1982 list who do not appear on this year's list are also shown in Table B.

Of the 84 companies appearing on the list in both Fiscal Years 1982 and 1983, 42 advanced their position, 34 are in a lower position, and 8 showed no change. Companies are considered as appearing on the list in both years despite mergers, acquisitions, divestitures, and name changes if a major component of a newly constituted company or the newly constituted company itself made the list as a component of a company in the top 100 in the prior year.

TABLE B

Companies Listed in FY 1983 But not in FY 1982

Ashland Oil, Inc. Brunswick Corp. Caterpillar Tractor Co. Computer Sciences Corp. Cubic Corp. Digital Equipment Corp. Harsco Corp. Lear Siegler Inc. Maersk Lines Ltd. Oaden Corp. Rolls Royce Ltd. Sam Whan Corp. Southern Union Co. Sundstrand Corp. Waterman Marine Corp. Xerox Corp.

Companies Listed in FY 1982 But Not in FY 1983

Agip Petroli SPA American Motors Corp. First Colony Farms, Inc. Getty Oil Co. Hanil Dev. Co. Ltd & Al Mabani JV Hospital Corp. of America Mabco Prefabricated Bldg. Co. Mi Ryung Construction Co., Ltd. Peterson Builders Inc. Phibro Salomon Inc. Sun Chemical Corp. Sun Co. Inc. Texaco Inc. Transamerica Corp. United Industrial Corp. You One Construction Co. Ltd.

Some of the major changes during FY 1983 were the acquisition of Bendix Corp. by Allied Corp.; acquisition of AM General Corp. and Sierra Research Corp. by LTV Corp.; acquisition of Itek Corp. by Litton Industries, Inc., and the name change of International Telephone & Telegraph Corp. to ITT Corp.

Primary Procurement Categories of the Top 100 Companies

Although the contract work of many companies on the list includes more than one procurement category, each company has been assigned in Table C (page 4) to the procurement category that accounts for its largest dollar volume of DOD awards; for example, ITT Corp. is a multi-industry company producing electronic and communications equipment and industrial and consumer products. For this table, it has been assigned to "Electronics", the procurement category accounting for its largest dollar volume of DOD contract awards.

TABLE C

Procurement	Num	ber of Comp	anies
Category	FY 1983	FY 1982	Change
Aircraft	18	15	+3
Missiles	9	11	-2
Ships	7	7	0
Tank-Automotive	8	6	+2
Ammunition	7	8	- 1
Electronics	21	20	+1
Services	10	9	+1
Construction	0	4	- 4
Petroleum	16	19	-3
Weapons	1	1	0
Subsistence	0	0	0
All Other	3	0	+ 3

Companies With Prime Contract Awards Totaling Over \$2 Billion

During FY 1983, 13 companies received prime contract awards totaling over \$2 billion. Each company is listed in Table D by rank, along with its FY 1982 rank and the dollar value of the awards it received in both FY 1982 and FY 1983. Table E (page 5) describes the major products of these 13 companies.

TABLE D

Rank		Company Name	Awards (in Billions)		
1983	1982	Company Name	1983	1982	
1	1	General Dynamics Corp.	\$6.8	\$ 5.9	
2	2	McDonnell Douglas Corp.	6.1	5.6	
3	8	Rockwell International Corp.	4.5	2.7	
4	4	General Electric Co.	4.5	3.7	
5	6	Boeing Co.	4.4	3.2	
6	5	Lockheed Corp.	4.0	3.5	
7	3	United Technologies Corp.	3.9	4.2	
8	22	Tenneco, Inc.	3.8	.8	
9	7	Hughes, Howard Medical Institute	3.2	3.1	
10	9	Raytheon Co.	2.7	2.3	
11	11	Grumman Corp.	2.3	1.9	
12	10	Martin Marietta Corp.	2.3	2.0	
13	15	Litton Industries, Inc.	2.2	1.3	

TABLE E

Company **Major Products** 1. General Dynamics Corp. F-16 and F-111 fighter aircraft. Nuclear submarines. TOMAHAWK and STINGER missile systems. MK-15 close-in weapon system. M1 tank. F-18 HORNET, F-15 EAGLE, AV-8 HARRIER, and KC-10 2. McDonnell Douglas Corp. aircraft. HARPOON missile system. 3. Rockwell International Corp. B-1 bomber. RDT&E for aircraft, and missile and space systems. Space vehicles. Various electronics and communications equipment. 4. General Electric Co. Nuclear reactors for submarines and aircraft carriers. J-79, J-85, TF-34, and F-101 turbofan and turbojet engines. Space vehicle components. Guided missile subsystems. Transmission components for M-2 infantry fighting vehicles. Armament training devices. 5. Boeina Co. C-135 STRATOLIFTER, B-52 STRATO FORTRESS, and E-3A aircraft. Miscellaneous electronics for B-1 bomber. ZAGM-86 missile system. AWACS. RDT&E for electronics & communication equipment, aircraft, missile & space systems and space transportation systems. 6. Lockheed Corp. C-5 GALAXY, C-130 HERCULES, and P-3 ORION aircraft. TRIDENT and POLARIS missile systems. Amphibious assault ships. RDT&E for missile & space systems, aircraft, and electronics & communication equipment. 7. United Technologies Corp. F-100, TF-30, TF-33, and J-52 turbofan and turbojet aircraft engines. UH-60 UTTAS, CH-53 SEA STALLION, and SH-60 SEAHAWK helicopters.

8. Tenneco, Inc.

Institute

9. Hughes, Howard Medical

TOW, MAVERICK and PHOENIX missile systems.

Radar equipment and guided missile systems for F-14,

F-15, AH-1J, B-52 and SR-71 aircraft.

RDT&E for electronics & communication equipment,

missile & space systems, and ammunition.

Equipment for M-1 combat tank and M-2 infantry fighting

vehicle.

Aircraft carriers.
Nuclear submarines.

TABLE E (Continued)

Company	Major Products
10. Raytheon Co.	PATRIOT, HAWK, SPARROW, NATO SEA SPARROW, and SIDEWINDER missile systems. Various electronics & communication equipment.
11. Grumman Corp.	F-14 TOMCAT, A-6 INTRUDER, E-2 HAWKEYE, C-2 GREYHOUND, and EA-6B PROWLER aircraft. Electronics for F-16 FIGHTING FALCON. RDT&E for aircraft, electronics & communications equipment, and missile & space systems.
12. Martin Marietta Corp.	PERSHING and TITAN missile systems. AH-64 APACHE aircraft. Guided missile cruisers. Operation of Government ammunition facility. RDT&E for missile and space systems, and electronics and communication equipment.
13. Litton Industries, Inc.	Guided missile cruisers, battleships, and des 'ers. Various electronics and communications equitient.

RANK	PARENT COMPANY	RANK	PARENT COMPANY
68	AFDSCRACE CSRR (N)	96	LEAR SIEGLER INC
	AEROSPACE CORP (N) ALLIED CORP		LITTON INDUSTRIES, INC
	AMERICAN TELEPHONE + TELEGRAPH CO		LOCKHEED CORP
	ASHLAND OIL INC		MAERSK LINE LTD
47.		12.	
29.		71.	MASSACHUSETTS INSTITUTE TECHNOLOGY
5.	BOEING CO	2.	MCDONNEL! DOUGLAS CORP
88.	BRUNSWICK CORP	78.	MITRE (THE) CORP (N)
72.		5 7.	MOBIL CORP
62.	CATERPILLAR TRACTOR CO	56 .	
66.	COASTAL CORP	59.	MORTON THICKOL INC
86.		39.	
61.		52.	MOTOROLA INC
64.		84.	NI INDUSTRIES
99.	CUBIC CORP	53.	NORTH AMERICAN PHILIPS CORP
100			NORTHROP CORP
83.	DUCHOSSOIS THRALL GROUP INC	58 .	
80.	DUPONT E I DE NEMOURS + CO	75.	OSHKOSH TRUCK CORP
54	•	73.	
44.	EATON CORP		PAN AMERICAN WORLD AIRWAYS INC
63.	EMERSON ELECTRIC CO		PENN CENTRAL CORP
25.		18.	
17.	F M C CORP	10.	
69.			REYNÖLDS R J INDUSTRIES INC ROCKWELL INTERNATIONAL CORP
22.		3. 79.	
30			ROYAL DUTCH SHELL GROUP
1. ⊿.			SAM WHAN CORP
23.	GENERAL MOTORS CORP		SANDERS ASSOCIATES INC
25. 35.		91.	
45.			SIGNAL COMPANIES INC (THE)
60.			SINGER CO
11.		40.	SOBERBIO INC
46	GUAM O'L + REFINING CO INC		SOUTHERN UNION CO
76.			SPERRY CORP
90.	GULF STATES OIL & REFINING CO	37.	
70.	H & H CO	65.	
42	HARRIS CORP	92.	SUNDSTRAND CORP
95	HARSCO CORP	19.	T R W INC
55	HERCULES, INC	58.	TELEDYNE INC
89.			TENNECO INC
21.	HONEYWELL INC	33.	TEXAS INSTRUMENTS INC
34.	HUGHES HOWARD ESTATE OF	31.	TEXTRON INC
9.	HUGHES HOWARD MEDICAL INSTITUTE	43.	TEXTRON INC TODD SHIPYARDS CORP
36.	I T T CORP	7.	UNITED TECHNOLOGIES CORP
15.		97.	VARIAN ASSOCIATES INC
74.	JOHNS HOPKINS UNIVERSITY (N)	49.	WATERMAN MARINE CORP
93.	KAMAN CORP		WESTINGHOUSE ELECTRIC CORP
94.	KUWAIT PETROLEUM CORP		WILLIAMS INTERNATIONAL CORP
16.	L T V CORP	87.	XEROX CORP

100 COMPANIES AND THEIR SUBSIDIARIES LISTED ACCORDING TO NET VALUE OF PRIME CONTRACT AWARDS

FISCAL YEAR 1983 (1 OCT 1982 - 30 SEP 1983)

RANK	COMPANIES	THOUSANDS OF DOLLARS	PERCENT OF TOTAL	CUMULATIVE PERCENT OF TOTAL
	TOTAL	\$128,242,123	100.00	100.00
	TOTAL, 100 COMPANIES + THEIR SUBSIDIARIES	89,578,443	69.85	69.85
1.	GENERAL DYNAMICS CÖRP DATAGRAPHIX GMBH DATAGRAPHIX INC STRÖMBERG CARLSON CORP	6,804,679 47 8,253 5,328		
	TOTAL	6,818,307	5.32	5.32
2.	MCDONNELL DOUGLAS CORP MCDONNELL DOUGLAS ELECTRONICS CO MCDONNELL DOUGLAS TECHNICAL SVS CO POLHEMUS NAVIGATION SCIENCES INC VITEK SYSTEMS INC	6,134,947 6,320 1,301 46 102		
	TOTAL	6,142,716	4.79	10.11
3.	ROCKWELL INTERNATIONAL CORP COLLINS INTERNATIONAL SERVICE CO WESCOM INC	4,544,214 617 281		
	TOTAL	4,545,112	3.54	13.65
4.	GENERAL ELECTRIC CO CANADIAN GENERAL ELECTRIC CO, LTD GENERAL ELECTRIC MEDICAL SYSTEMS MANAGEMENT + TECHNICAL SERVICES CO	4,453,547 1,105 895 62,368	0.52	17.17
	TOTAL	4,518,015	3.52	17.17
5.	BOEING CO B E & C ENGINEERS INC BOEING COMPUTER SERVICES INC BOEING OF CANADA LTD BOEING SERVICES INTERNATIONAL INC BOEING VERTOL CO HYDRAULIC UNITS INC	4,021,366 838 38,678 63 84,240 269,881 7,684		
	TOTAL	4,422,750	3.45	20.62
6 .	LOCKHEED CORP LOCKHEED CALIFORNIA CO LOCKHEED ELECTRONICS CO, INC LOCKHEED ENGINEERING & MGT SVC CO LOCKHEED MISSILES + SPACE CO INC LOCKHEED SHIPBUILDING CONSTRUCTION LOCKHEED SUPPORT SYSTEMS INC MURDOCK MACHINE + ENGR CO OF TEXAS	2,063,135 1,855 72,628 2,921 1,516,074 338,235 7,812 3,054		
	TOTAL	4,005,714	3.12	23.74
7.	UNITED TECHNOLOGIES CORP AMERICAN COMPUTER & ELECTRONICS CO CARRIER INTERNATIONAL CORP	3,675,206 5,335 1,087		

RANK	COMPANIES	THOUSANDS OF DOLLARS	OF TOTAL	PERCENT OF TOTAL
7.	UNITED TECHNOLOGIES CORP			
	ESSEX GROUP INC	3,173		
	INMONT CORP Norden Systems inc	25		
	OTIS ELEVATOR CO	181,421 934		
	PRATT + WHITNEY AIRCRAFT OF WVA	46		
	UNITED TECHNOLOGIES RESEARCH CTR	218		
	TOTAL	3,867,445	3.02	26 76
	.0172	0,007,440	0.02	20.70
8.	TENNECO INC			
	CASE (JI) CO	75,290		
	CASE POWER + EQUIPMENT LTD MONROE AUTO EQUIPMENT CO	237 3,221		
	NEWPORT NEWS SHIPBLD + DRY DOCK CO	3,683,357		
	PACKAGING CORP OF AMERICA	30		
	TOTAL	3,762,135	2 02	29,69
	TOTAL	3,702,133	2.93	2.3.03
9.	HUGHES HOWARD MEDICAL INSTITUTE			
	HUGHES AIRCRAFT CO HUGHES COMMUNICATION SERVICES INC	3,151,308		
	SANTA BARBARA RESEARCH CENTER	55,000 33,312		
	SPECTROLAB INC	295		
	TOTAL	0.000.015	0 50	20.00
	TOTAL	3,239,915	۵.53	32.22
10.	RAYTHEON CO	2,501,521		
	BEECH AEROSPACE SERVICES	48,824		
	BEECH AIRCRAFT CÖRP CALÖRIC CÖRP	106,771 60		
	DENVER BEECHCRAFT	242		
	ELECTRICAL INSTALLATIONS LTD	91		
	GLENWOOD RANGE CO Indiana beechcraft inc	1,111		
	IOWA MEG CO OF CEDAR RAPIDS IOWA	304 32 5		
	MACHLETT LABORATORIES INC	195		
	RAYTHEON DATA SYSTEMS CO	7,231		
	RAYTHEON INTERNATIONAL SYSTEMS RAYTHEON MARINE CC	248		
	RAYTHEON OCEAN SYSTEMS CO	2,952 200		
	RAYTHEON PENINSULA SYSTEMS CO	5,614		
	RAYTHEON PROCUREMENT CO INC	2,718		
	RAYTHEON SERVICE CO RAYTHEON TECHNICAL ASSISTANCE CO	43,830		
	SEDCO SYSTEMS INC	1,150 92 0		
	SWITCHCRAFT INC	37		
	UNITED BEECHCRAFT INC	94		
	UNITED ENGINEERS + CONSTRUCTORS	3,889		
	TOTAL	2,728,327	2.13	34.35
11,	GRUMMAN CORP	2 220		
11.	GRUMMAN AEROSPACE CORP	3,339 2,291,662		
	GRUMMAN DATA SYSTEMS CORP	2,694		
	TOTAL	2 207 605	1 70	00.14
	IOIAL	2,297,695	1.79	36.14
12.	MARTIN MARIETTA CORP	2,178,223		
	MARTIN MARIETTA ALUMINUM INC MARTIN MARIETTA ALUMINUM SALES INC	133 93,583		
	THE THE PERIOD OF THE	33,003		
	TOTAL	2,271,939	1.77	37.91

RANK	COMPANIES	THOUSANDS OF DOLLARS	PERCENT OF	CUMULATIVE PERCENT OF
			·	
13,	LITTON INDUSTRIES, INC BELOIT POWER SYSTEMS DIEHL DATA SYSTEMS INTERNATIONAL LASER SYSTEMS INC ITEK CORP LITTON INDUSTRIAL PRODUCTS INC LITTON MICROWAVE COOKING PRODUCTS LITTON PRECISION PRODS INTL INC LITTON SYSTEMS INC MONROE BUSINESS EQUIPMENT CO INC MONROE CALCULATING CO MONROE SYSTEMS FOR BUSINESS	29,433 1,037 3,119 3,632 95,047 5,823 258 250 2,029,883 284 133 33		
	TOTAL	2,168,932	1.69	39.60
14.	WESTINGHOUSE ELECTRIC CORP T C O M CORP UNIMATION INC WESTINGHOUSE INFORMATION SERVICES WESTINGHOUSE LEARNING CORP WESTINGHOUSE OVERSEAS SERVICE CORP	1,774,727 2,235 62 95 95 1,121		
	TOTAL	1,778,335	1.39	40.99
15.	INTERNATIONAL BUSINESS MACHINES CO I B M DEUTSCHLAND GMBH I B M INSTRUMENTS INC	1,419,243 1,969 53		
	TOTAL	1,421,265	1.11	42.10
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		72.10
16.	L T V CORP A M GENERAL CORP JONES & LAUGHLIN STEEL INC SIERRA RESEARCH CORP VOUGHT CORP	569,552 143 60,690 712,487		
	TOTAL	1,342,872	1.05	43.15
17.	F M C CORP F M C ASSOCIATES TOTAL	1,235,589 181 1,235,770	0.96	44.11
	D 0 A 00DD			
18.	R C A CORP HERTZ CORP HERTZ EQUIPMENT RENTAL CORP R C A AMERICAN COMMUNICATIONS INC R C A GLOBAL COMMUNICATIONS, INC	1,159,391 532 134 9,264 11,803		
	TOTAL	1,181,124	0.92	45.03
19.	T R W INC E S L INC T R W COLORADO ELECTRONICS, INC	1,066,330 53,476 17,032	0.02	40.00
	TOTAL	1,136,838	0.89	45.92
20.	SPERRY CORP	1,132,502	0.88	46.80
21.	HONEYWELL INC ELECTRONICS FOR MEDICINE HONEYWELL INFORMATION SYSTEMS, INC HONEYWELL MARINE SYSTEMS CENTER HYDRO PRODUCTS INC	945, 956 173 154, 803 538 841		

RANK	COMPANIES	THOUSANDS	PERCENT	CUMULATIVE
		DOLLARS	TOTAL	PERCENT OF TOTAL
21.				
	SKINNER PRECISION INDUSTRIES INC	67 371		
	SPECTRONICS INC TETRA TECH INC	11,153		
	TETRA TEON THO			
	TOTAL	1,113,902	0.87	47.67
22.	FORD MOTOR CO	7,126		
	FORD AEROSPACE + COMMUNICATIONS	1,065,160		
	TOTAL	1,072,286	0.84	48.51
23.	GENERAL MOTORS CORP	893,440	0.70	49.21
24.	AMERICAN TELEPHONE + TELEGRAPH CO	382,566		
	AMERICAN BELL INC	5,382		
	AMERICAN BELL INTERNATIONAL INC	413		
	BELL TELEPHONE CO OF PA	4,130		
	CHESAPEAKE & POTOMAC TEL CO	54,440		
	CHESAPEAKE + POTOMAC TEL CO OF MD CHESAPEAKE + POTOMAC TEL CO OF VA	4,099 13,214		
	DIAMOND STATE TEL CO	572		
	ILLINOIS BELL TEL CO	2,116		
	INDIANA BELL TEL CO, INC	2,510		
	MICHIGAN BELL TEL CO	3,801		
	MOUNTAIN STATES TEL & TEL	19,705		
	NEW ENGLAND TEL + TEL CO	6,636		
	NEW JERSEY BELL TELEPHONE CO NEW YORK TELEPHONE CO	2,937 15,311		
	NORTHWESTERN BELL TELEPHONE CO	5,735		
	CHIC BELL TELEPHONE CO	2,796		
	PACIFIC NORTHWEST BELL TELEPHONE	4.329		
	PACIFIC TELEPHONE + TELEGRAPH CO	15, 149		
	SOUTH CENTRAL BELL TEL CO	11,919		
	SOUTHERN BELL TELEPHONE + TELEGRPH	17,596		
	SOUTHERN NEW ENGLAND TELEPHONE CO SOUTHWESTERN BELL TELEPHONE	154 30,351		
	TELETYPE CORP	18,374		
	WESTERN ELECTRIC CO INC	252,896		
	WISCONSIN TEL CO	486		
	TOTAL	877,617	0.68	49.89
25.	EXXON CORP	473,024		
	ESSO A G	50,577		
	ESSO ITALIANA S P A	808		
	ESSO OFFICE SYSTEMS INC	556		
	ESSO PETROL CO LTD	87		
	EXXON CO USA EXXON ENTERPRISES INC	347, 290 306		
	EXXON INFORMATION SYSTEM	43		
	EXXON RESEARCH + ENGINEERING CO	40		
	RELIANCE ELECTRIC CO	1,484		
	TOTAL	874,215	0.68	50.57
26.	NORTHROP CORP			
20.	NORTHROP SERVICES INC	729,741 8,086		
	NORTHROP WORLDWIDE ACFT SVCS INC	108,836		
	TOTAL	846,663	0.66	51.23

RANK	COMPANIES	THOUSANDS OF DOLLARS	OF TOTAL	PERCENT OF TOTAL
				~
2 7.	BENDIX AUTOLITE CORP BENDIX CORP BENDIX FIELD ENGINEERING CORP COURTER INC	47,943 1,042 642,494 44,440 1,799		
	ELTRA CORP ENGINEERING RESEARCH INC FISHER SCIENTIFIC CO FRAM CORP INSTRUMENTATION LABORATORY INC	16,387 22,096 460 468 230		
	MERGENTHALER LINÖTYPE CÖ Texgas corp Wanner & Swasey co	47 56 786		
	TOTAL	778,248	0.61	51.84
28.	MAERSK LINE LTD	690,859	0.54	52.36
29.	AVCO CORP AVCO EMBASSY PICTURES CORP AVCO EVERETT RESEARCH LABURATORY	657,614 58 17,883		
	COTAL		0.53	52.91
30,	G T E CORP G T E AUTOMATIC ELECTRIC INC G T E COMMUNICATION PRODUCTS G T E INTERNATIONAL INC G T E LABORATOR:ES, INC G T E LENKURT, INC G T E PRODUCTS CORP G T E SERVICE CORP GENERAL TELEPHONE CO OF CALIFORNIA GENERAL TELEPHONE CO OF FLORIDA GENERAL TELEPHONE CO OF INDIANA GENERAL TELEPHONE CO OF KENTUCKY SENERAL TELEPHONE CO OF NORTHWEST GENERAL TELEPHONE CO OF SOUTHEAST GENERAL TELEPHONE CO OF SOUTHWEST HAWAIIAN TELEPHONE CO	300 1,908 159 96 1,565 758 616,610 1,845 5,825 5,126 639 129 998 839 3,226 2,217 31,349	0.53	53.44
31.	TEXTRON INC BELL HELICOPTER INTL INC BELL TECHNICAL OPERATIONS CORP JACOBSEN MFG CO TOTAL	653,500 7,046 10,534 97 671,177	0.52	53.96
32.	SINGER CO H R B SINGER INC	588,748 61,160		
	TOTAL	649,908	0.51	54.47
33.	TEXAS INSTRUMENTS INC	646,825	0.50	54.97
34 .	HUGHES HOWARD ESTATE OF HUGHES HELICOPTERS INC SUMMA CORP	614,708 11,583		
	TOTAL	626,291	0.49	55.46

RANK	COMPANIES	THOUSANDS OF DOLLARS	PERCENT OF Total	CUMULATIVE PERCENT OF TOTAL
35.		2 222		
	AERUJET ELECTRU STSTEMS CU	50,066		
	AEROJET GENERAL CORP	312,671		
	AEROJET LIQUID ROCKET CO	21,722		
	AEROJET ORDNANCE & MFG CO	26,259		
	AEROJET ORDNANCE & MFG CO AEROJET STRATEGIC PROPULSION CO	155,420		
	AEROJET TACTICAL SYSTEMS	38,258		
	JOHNSTON PUMP CO	59		
	TOTAL	606,783	0.47	55.93
36.	! T T CORP	295,496		
	FEDERAL ELECTRIC CORP	81,887		
	FELEC SERVICES INC	118,924		
	I T T ARCTIC SERVICES	30		
	I T T BARTON	713		
	I T T BLACKBURN CORP	227		
	I T T CONTINENTAL BAKING CO	1,741		
	I T T COURIER TERMINAL SYSTEMS INC	1,252		
	I T T ELECTRO OPTIC PRODUCTS	13,890		
	I T T GENERAL CONTROLS, INC	1,078		
	I T T GILFILLAN INC	70,244		
	I T T GRINNELL CORP	34		
	I T T GWALTNEY INC	4,753		
	I T T HAMMEL DAHL CONOFLOW	397		
	I T T HARPER, INC	136		
	I T T HENZE SERVICE	25		
	I T T JENNINGS	758		
	I T T MACKAY MARINE	40		
	I T T MARLOW PUMPS	146		
	I T T TELECOMMUNICATIONS CORP	1,380		
	I T T WORLD COMMUNICATIONS, INC	9,493		
	J C C PUMP CO INC	534		
	U S TRANSMISSION SYSTEMS	187		
	TOTAL	603,365	0.47	56.40
37.	STANDARD OIL CO OF CALIF			
	CALTEX ASIA LTD	34		
	CALTEX NEW ZEALAND, INC	56		
	CALTEX GIL PRODUCTS CO	76, 932		
	CHEVRON CHEMICAL CO	66		
	CHEVRON INTERNATIONAL OIL CO, INC	33		
	CHEVRON U S A INC	513,746		
	CHECKET C C A THE			
	TOTAL	590,867	0.46	56.86
38.	TELEDYNE INC	77,903		
00 .	MICRONETICS INC			
		35		
	TELEDYNE ADCOM	32		
	TELEDYNE AFROSPACE SYSTEMS	464		
	TELEDYNE AVIONICS	1,877		
	TELEDYNE BROWN ENGINEERING	58,780		
	TELEDYNE C A E	27,691		
	TELEDYNE CAMERA SYSTEMS	2,029		
	TELEDYNE CAST PRODUCTS	72		
	TELEDYNE CONTINENTAL MOTORS	154,319		
	TELEDYNE CONTROLS	5,424		
	TELEDYNE CRYSTALONICS	79		
	TELEDYNE ELECTRO MECHANISMS	120		
	TELEDYNE ELECTRONICS	31,336		
	TELEDYNE FARRIS ENGINEERING	51,336		
	TELEDYNE FIRTH STERLING INC			
	TELEDYNE GEOTECH	2,340		
		3,622		
	TELEDYNE GEGTRONICS	118		
	TELEDYNE GURLEY	39		

RANK	COMPANIES	THOUSANDS OF DOLLARS	PERCENT OF	CUMULATIVE PERCENT OF
38.	TELEDYNE INC TELEDYNE HASTINGS RAYDIST TELEDYNE HYDRA POWER	859 1,967		
	TELEDYNE INDUSTRIES, INC TELEDYNE INET INC	157,740 1,594		
	TELEDYNE LANDIS MACHINE CO TELEDYNE LEWISBURG	806 163		
	TELEDYNE M E C	44,654 6,995		
	TELEDYNE MCCORMICK SELPH TELEDYNE MCKAY	231		
	TELEDYNE MICROELECTRONICS TELEDYNE MONARCH RUBBER	348 912		
	TELEDYNE NEČSHÖ TELEDYNE PHILBRICK	230 37		
	TELEDYNE PINES	337 40		
	TELEDYNE RELAYS TELEDYNE REPUBLIC MFG	1,925		
	TELEDYNE SPRAGUE ENGINEERING TELEDYNE THERMATICS	765 807		
	TELEDYNE VASCÖ Teledyne Walterbörö	90 1,041		
	TELEDYNE WESTERN WIRE & CABLE TELEDYNE WISCONSIN MOTOR	47 394		
		588.773	0.46	57.32
	TOTAL			
39 .	MOTOR OIL HELLAS	587,159	0.46	57.78
40.	SÖBERBIÖ INC PRIDE REFINING INC	456,888		
	TOTAL	456,888	0.36	58.14
41.	PAN AMERICAN WORLD AIRWAYS INC PAN AMERICAN WORLD SERVICES INC	90,605 359,317		
	TOTAL	449,922	0.35	58.49
42.	HARRIS CORP	446,122	0.35	58.84
43.	TODD SHIPYARDS CORP	444,284	0.35	59.19
44.	EATON CORP	441,778	0.34	59.53
45.	GÖÖDYEAR TIRE + RUBBER CÖ DEUTSCHE GÖÖDYEAR GMBH	75,371 85		
	GOODYEAR AEROSPACE CORP Motor wheel corp	361,444 3,762		
	TOTAL	440,662	0.34	59.87
46.	GUAM OIL + REFINING CO INC	379,283	0.30	60.17

RANK	COMPANIES	THOUSANDS OF DOLLARS	PERCENT OF	
47 .	ATLANTIC RICHFIELD CO ANACONDA CO ARCO PETROLEUM CO	284,867 53 74,957		
	ARCO PIPE LINE CO ERICSSON INC	226 1,784		
40	TOTAL	361,887	0.28	60.45
46.	SANDERS ASSOCIATES INC CALIFORNIA COMPUTER PRODUCTS INC	352,363 1,378		
	TOTAL	353,741	0.28	60.73
49 .	WATERMAN MARINE CORP WATERMAN STEAMSHIP CORP	345, 474		
	TOTAL	345,474	0.27	61.00
50.	SIGNAL COMPANIES INC (THE) AERO HYDRAULICS INC AIRSUPPLY CO AMPEX CORP AMPEX EUROPA GMBH DUNHAM BUSH INC	44 542 18,238 116 717		
	GARRETT CORP (THE) GARRETT MFG LTD GARRETT PNEUMATICS CO GARRETT TURBINE MACK TRUCKS INC U O P INC UNIVERSAL OIL PRODUCTS CO WHEELABRATOR FRYE	300,591 259 11,791 5,155 629 1,052 1,913 1,263		
	TOTAL	342,310	0.27	61.27
51.	ROYAL DUTCH SHELL GROUP SHELL CHEMICAL INC SHELL EASTERN PETROLEUM PTE LTD SHELL INTERNATIONAL SHELL OIL CO SHELL UK LTD	363 120,140 15,911 198,887 244		
52 .	TOTAL MOTOROLA INC	335,545	0.26	61.53
02 .	CODEX CORP FOUR PHASE SYSTEMS INC MOTOROLA SEMICONDUCTOR PRODUCTS UNIVERSAL DATA SYSTEMS INC	294,142 11,294 15,222 132 488		
	TOTAL	321,278	0.25	61 . 78
53.	NORTH AMERICAN PHILIPS CORP AIRPAX ELECTRONICS INC AIRPAX PRODUCTS AMPEREX ELECTRONIC CORP ANCHOR BRUSH CO INC GENERAL ATRONICS CORP MAGNAVOX ADVANCED PROD & SYS CO MAGNAVOX CO MAGNAVOX DATA SYSTEMS INC MAGNAVOX GOVT + INDUSTRIAL ELEC CO MEPCO ELECTRA INC NORTH AMERICAN PHILIPS CONTROLS CO NORTH AMERICAN PHILIPS LTG CORP PHILIPS ELECTRONIC INSTRUMENTS INC	1,565 425 1,085 3,821 77 10,132 12,740 104,006 253 168,738 576 103 2,096 842		

		 		
RANK	COMPANIES	THOUSANDS OF DOLLARS	PERCENT	CUMULATIVE
5 3.	NORTH AMERICAN PHILIPS CORP PHILIPS ELMET CORP PHILIPS MEDICAL SYSTEMS INC S & H X RAY CO THE	26 5,253 107		
	TOTAL	311,845	0.24	62.02
54.	E SYSTEMS, INC SERV AIR INC	304,697 4,844		
	TOTAL	309,541	0.24	62.26
55 .	HERCULES, INC ADRIA LABORATORIES INC	307,408 605		
	TOTAL	308,013	0.24	62.50
56.	MORRISON KNUDSEN CÖ INC FERGUSON H K CÖ NATIONAL STEEL & SHIPBUILDING CÖ	8,662 1,376 297,836		
	TOTAL	307,874	0.24	62.74
57 .	MOBIL CORP CONTAINER CORP OF AMERICA HOME OIL CO THE HYDRO CONDUIT CORP MOBIL OIL CORP MOBIL SHIPPING & TRANSPORTATION CO	69 132 1,951 293,283 122		
	TOTAL	295,557	0.23	62.97
58.	OGDEN CORP AVONDALE SHIPYARDS INC OGDEN FOOD PRODUCTS CORP	292,300 272		62.20
	TOTAL	292,572	0.23	
59 .	MORTON THICKOL INC	281,167	0.22	63.42
60.	GOULD, INC DEVICES & COMPONENTS CO I T E IMPERIAL CORP SYSTEMS ENGINEERING LABS INC	260,234 43 7,720 10,339		
	TOTAL	278,336	0.22	63.64
61.	CONGOLEUM CORP BATH IRON WORKS CORP	277,815		
	TOTAL	277,815	0.22	63 . 86
62.	CATERPILLAR TRACTOR CO SOLAR TURBINES INTERNATIONAL SOLAR TURBINES OVERSEAS LTD TOWNOTOR CORP	196,386 74,858 44 2,839		
	TOTAL	274,127	0.21	64.07
63 .	EMERSON ELECTRIC CO APPLETON ELECTRIC CO ATWOOD & MORRILL CO INC FLOW TECHNOLOGY INC	238,741 419 138 245		

RANK	COMPANIES	THOUSANDS OF DOLLARS	PERCENT OF	CUMULATIVE PERCENT OF TOTAL
63.	EMERSON ELECTRIC CO			
•	ROSEMOUNT INC SOUTHWEST TRUCK BODY CO	8,108 25,869		
	TOTAL	273,520	0.21	64.28
64.	CONTROL DATA CORP SERVICE BUREAU CORP THE	273,360 48		
	TOTAL.	273,408	0.21	64.49
65 .	STANDARD ÖIL ÖF INDIANA AMÖCÖ ÖIL CÖ AMÖCÖ UNITED KINGDÖM	256,736 12,990		
	TOTAL	269,726	0.21	64.70
66.	COASTAL CORP BELCHER NEW ENGLAND INC BELCHER OIL CO BELCHER TERMINALS INC COASTAL STATES MARKETING INC PACIFIC REFINING CO	5,973 44,745 827 212,843 3,988		
	TOTAL	268,376	0.21	64.91
67.	PENN CENTRAL CORP AUTOMATION INDUSTRIES INC G & H TECHNOLOGIES INC G K TECHNOLOGIES INC MARATHON BATTERY CO MARATHON LE TOURNEAU CO SPRAGUE ELECTRIC CO	250,123 399 3,776 8,427 772 987		
	TOTAL	264,484	0.21	65.12
68.	AEROSPACE CORP (N)	260,474	0.20	65.32
69 .	FAIRCHILD INDUSTRIES, INC AMERICAN SATELLITE CORP GREER HYDRAULICS INC V S I CORP TOTAL	252,267 5,129 381 2,213 259,990	0.20	65 .52
70.	нв н со	251,001	0.20	65.72
71.	MASSACHUSETTS INSTITUTE TECHNOLOGY	250,151	0 20	65.92
72.	BURROUGHS CORP BURROUGHS CONTROL CORP MEMOREX CORP SYSTEM DEVELOPMENT CORP	124,659 1,783 11,994 90,590	0.18	66.10
73 .	TOTAL PACIFIC RESOURCES INC	229,026	0, 10	80.10
, •.	GASCO INC HAWAIIAN INDEPENDENT REFINERY INC	3, 9 63 223,542		

RANK	COMPANIES	٥F	PERCENT OF TOTAL	CUMULATIVE PERCENT OF TOTAL
73.	PACIFIC RESOURCES INC PRINORTHWEST INC	1,148		
	TOTAL	228,653	0.18	66.28
74.	JOHNS HOPKINS UNIVERSITY (N)	227,175	0.18	66.46
75 .	ÖSHKÖSH TRUCK CÖRP	224,454	0.18	66.64
76.	GULF ÖIL CÖRP G A TECHNÖLÖGIES GULF PETRÖLEUM SA GULF REFINING & MARKETING CÖ	49,838 8,339 132 258		
	HARSHAW CHEMICALS CO TRANSOCEAN GULF OIL CO	392 152,760		
	TOTAL	211,719	0.17	66.81
77 .	ASHLAND OIL INC ALLIED OIL CO ASHLAND CHEMICAL CO	174,998 1,681 1,165		
	ASHLAND CONSTRUCTION CO ASHLAND PETROLEUM CO DREW CHEMICAL CORP EASTERN SEABOARD PETROLEUM CO, INC	2,566 320 29 4,629		
	FILTRÖL CÖRP Hölmes & Narver Inc Riley Beaird Inc Riley Stöker Cörp	274 5,870 841 13,937		
	TOTAL	206,310	0.16	66.97
78.	MITRE (THE) CORP (N)	206,007	0.16	67.13
79.	ROLLS ROYCE LTD	201,558	0.16	67.29
80.	DUPONT E I DE NEMOURS + CO CONOCO INC CONOCO LTD ENDO LABORATORIES INC REMINGTON ARMS CO, INC	10,095 39,052 5,644 1,020 145,179		
	TOTAL	200,990	0.16	67 45
81.	WILL:AMS INTERNATIONAL CORP	200,595	0.16	67.61
82.	REYNOLDS R J INDUSTRIES INC DEL MONTE CORP DEL MONTE SALES CO HEUBLEIN SPIRITS & WINE CO REYNOLDS R J TOBACCO CO SEA LAND INDUSTRIES USA INC SEA LAND SERVICE INC	1,192 24,862 2,181 1,004 31,490 42 129,856	0.15	67.76
	TOTAL	190,627	0.15	0/./0

RANK	COMPANI ES	THOUSANDS OF DOLLARS	PERCENT OF	
83.	DUCHOSSOIS THRALL GROUP INC	100.000		
	CHAMBERLAIN MFG CORP THRALL CAR MFG CO	186,033 94		
	THRALL CAR FIFS CO			
	TOTAL	186,127	0.15	67.91
84.	NI !NDUSTRIES	5,174		
04 .	NORRIS INDUSTRIES INC	175,846		
	NORRIS NI INDUSTRIES	1,324		
	TOTAL	182,344	0.14	68.05
85.	SAM WHAN CORP	178,881	0.14	68.19
86.	COMPUTER SCIENCES CORP	173,700	0.14	68.33
87.	XEROX CORP	162,382		
	FUJI-XEROX CO, LTD	1,825		
	KOREA XEROX CO LTD	796		
	RANK XEROX ESPANOLA S A	87		
	RANK XERÖX LTD XERÖX CÖLLEGE PUB!.ISHING	2,776 72		
	XEROX COLCEGE FORTONING	537		
	TOTAL	168,475	0.13	68.46
88.	BRUNSWICK CORP	112,434		
	DEVILS LAKE SIOUX MFG CO	48,460		
	LANGLEY CORP	262		
	ROYAL MFG CO	53		
	SHERWOOD MEDICAL INDUSTRIES, INC	1,766		
	TOTAL	162,975	0.13	68.59
		•		
89.	HEWLETT PACKARD CO	160,472	0.13	68.72
90.	GULF STATES OIL & REFINING CO	155,767	0.12	68.84
91.	SCIENCE APPLICATIONS INTL INC			
	SCIENCE APPLICATIONS INC	152,508		
	TOTAL	152,508	0.12	68.96
92.	SUNDSTRAND CORP	136,665		
	FALK CORP	104		
	SUNDSTRAND AIRCRAFT SERVICE	606		
	SUNDSTRAND DATA CONTROL INC	12,237		
	SUNDSTRAND HYDRAULICS	391 		
	TOTAL.	150,003	0.12	69.08
93.	KAMAN CORP	50,710		
	BRUNG C & SON INC	70		
	KAMAN AEROSPACE CORP	63,040		
	KAMAN SCIENCES CORP	1 7,8 50		
	KAMAN TEMPO	2,370		
	KAMATICS CORP	4,067		
	TOTAL	138,107	0.11	69.19
		•		

RANK	COMPANIES	ÖF DÖLLARS		CUMULATIVE PERCENT OF TOTAL
94.	KUWAIT PETROLEUM CORP KUWAIT NATIONAL PETROLEUM CO	137,980		
	TOTAL	137,980	0.11	69.30
95 .	HARSCO CORP	136,074		
	BRÖDERICK CÖ Patterson kelley co	27 34		
				60.41
	TOTAL	136,135	0.11	69.41
96.	LEAR SIEGLER INC	134,681	0.11	69.52
97.	VARIAN ASSOCIATES INC PULSE ENGINEERING INC	128,007 4,583 74		
	SEMICON ASSOCIATES INC Varian Graphics Varian instruments	47 42		
	TOTAL	132,753	0.10	69 62
98.	SOUTHERN UNION CO SOUTHERN UNION GAS CO SOUTHERN UNION REFINING CO	12,675 119,685		
	TOTAL.	132,360	0.10	69.72
99.	CUBIC CORP CUBIC WESTERN DATA United States Elevator Corp	128,472 653 538		
	TOTAL	129,663	0.10	69.82
100.	DIGITAL EQUIPMENT CORP	126,017	0.10	69.92